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Sustainable and ethical manufacturing: a case study from handloom industry

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Abstract

Global fashion industry has bitterly evidenced the social and environmental implications associated with fast production cycles, overuse of resources, waste generation, environmental pollution and unethical labour conditions. Growing consumer awareness regarding social and environmental impacts of fashion products has led to create a new marketplace for sustainable and ethical products. This paper highlights craft practice as one of the potential avenues for achieving sustainability within the fashion industry. Through a case study drawn from handloom industry, this paper explores a manufacturing approach that is committed to fair-trade principles and designed to prevent waste. We argue that this study reveals a business model that could positively contribute towards generating employment opportunities and sustainable household income for the rural community. We conclude the paper by highlighting that this type of a fair trade and environmentally conscious manufacturing process could address the three pillars of sustainability: social, economic and environment. Findings of the study invite manufacturers to revisit and redesign current fashion production systems, especially when waste and labour issues are hindering the sustainability.

Keywords: Fair trade, Zero waste, Sustainability, Fashion, Handloom textiles

Background

Sustainability could be explained in many different ways. Yet, for the fashion industry, sustainability means the 'environmental protection, social justice, economic fairness and cultural validity' (Parker, 2011, p4). Globalization and technological advancements have made a dramatic change in production and consumption patterns of the world's fashion. This global industry started to pose many challenges for sustainability efforts as fashion has become a throw-away commodity, and rapid phase production of short-lived products have become a normality. Cultural flavour of fashion has diminished as fashion became globalized and influenced by global trends. Vast availability of cheap, low-quality clothing allows overconsumption and premature disposal of fashion products (Niinimäki, 2011).

Textile and fashion industry is well known for exploitation of resources and unsustainable manufacturing practices, where environmental and social losses are often ignored (Beard 2008; Walker, 2007). However, the growing

awareness among consumers regarding the social and environmental impacts of fashion consumption has made a significant influence on the purchasing decisions towards ethical and sustainable fashion. Possible integration of craft and contemporary fashion has gained much attention in this context, mainly due to its potential contribution towards more sustainable futures (Ferraro et al., 2011). Hur and Beverley (2013) explored the role of craft in promoting sustainable fashion, in terms of both production and consumption. Cox and Bebbington (2015) insisted that craft practice and social sustainability share common aspirations, and if craft would support to meet sustainable development principles, it may help craft products to access new markets. In this regard, it is commendable that a practical approach has been taken by the Ethical Fashion Initiative, in which there is an attempt being made to connect marginalized craftspeople from developing world to the international fashion industry (International Trade Centre, 2016). It is therefore evident that the craft practices in fashion could address environment as well as other broader dimensions of sustainability, as it tends to promote the well-being of the local producers and craft communities towards a sustainable lifestyle.

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Globally, Sri Lanka is recognized not only as an export-oriented fashion manufacturing base but also as a home for a rich fashion craft industry. Sri Lankan fashion craft industry, which comprises mainly of handloom, batik, beeralu and embroidery, is one of the main income generator for rural communities and differently able people. With the developmental needs of the country in the post-war era, fashion craft industry is recognized as one of the most important industries for poverty alleviation, employment generation, enhancement of rural entrepreneurship and the development of new business opportunities (Export Development Board, 2013). Gradual development of local fashion craft industry not only generates economy but also promotes sustainable production and slow consumption. Nevertheless, an increasing global demand for environmentally sustainable products holds a greater potential for expansion of the global market for craft products. However, only a limited research has been carried out to highlight the importance of fashion craft industry in the context sustainable and ethical fashion movements.

Sri Lankan handloom industry

Handloom is a traditional weaving craft, practiced by generations of artisans to make attractive textile designs. Sri Lankan handloom industry is a highly labour-intensive and a decentralized sector of which the most of the manufacturing units are located in rural areas (Export Development Board 2013). It is also an environmentally friendly, low energy-driven sector where fair-trade manufacturing practices are appreciated and encouraged (Dhingra and Dhingra, 2012). In Sri Lanka, the handloom industry maintains a significant demand since its inception, due to its cultural artefacts, heritage and design capabilities. Sri Lankan handloom textile industry reached its peak in 1970s and experienced a decline after 1978, with the onset of the open economic policies and the growth of export-oriented apparel industry sector in Sri Lanka (Gomas, 2000). However, with the raising developmental needs of the country in the post-war era, handloom industry was repositioned as one of the most important industries to launch business opportunities for the development of local economy. As handloom textiles and handcrafted products have rapidly become major lifestyle statements for both national and international consumers, this industry now carries a significant potential for expansion, employment generation with lucrative export earning opportunities.

Further, Sri Lankan handloom textiles are highly recognized both locally and internationally not only for its innovative and modern design trends entwined with traditional craftsmanship but also for its premium quality. The products are often offered to global niche markets where handcrafted items of high value are preferred. In Sri Lanka, it is estimated that around 6,500 handlooms are in

operation, providing around 10,000 direct employment opportunities (Ministry of Industry and Commerce, 2012). Seven hundred seventy-one production centres are owned by provisional councils whereas 962 units scattered around the country are privately owned (Export Development Board, 2013). The industry serves both local and international markets with a wide range of product categories such as ready-made garments, soft toys, bed linen, table linen and curtain. Export markets for handloom products include Italy, Germany, Australia, France, Spain, Japan, Korea, Sweden, USA, Vietnam, Lebanon, Thailand, UK, Norway, Netherlands, etc. (Ministry of Industry and Commerce, 2012). In the year 2012, the total value of exports brought by the handloom sector was estimated as USD 870,000.

Fair trade

Globally, the green movement and fair labour movement are steadily getting momentum. Consumers are increasingly demanding products that are ethically made and environmentally safe (Lewis and Potter, 2011; OECD, 2008). While the modern consumers are concerned about the social and the environmental impact of the product they purchase, they incessantly criticize traditional manufacturing processes with highly pressurized production environments and poor labour conditions (Koszewzka, 2011). This shift in consumers' mind has led to a change in buying habits towards environmentally sustainable and ethical products (Shaw et al., 2006).

Fair trade represents an ethical approach to product manufacturing. This is also an important approach to alleviate poverty in the global south while contributing to build a socially and environmentally sustainable international trade (Taylor et al., 2005; Reynolds et al., 2004; Shreck, 2002). Fair trade aims to support farmers and craftsmen who are socially and economically marginalized. Community improvement, women empowerment and mitigation of environmental impact of the production process are some of the key aspects of fair trade (Andorfer and Liebe, 2015; Bassett, 2010). Access to fair-trade business models not only guarantee higher income levels but also promote collaboration and positive cultural bond among associates. Moreover, people who engage in fair-trade supply chain add value to their own culture, their identity, environment and also to the product (Belgian Development Agency 2012). One essential feature of fair trade is to support local community to organize and operate collectively, which enhances trustworthiness among local communities. The World Fair Trade Organization (WFTO) represents a global network of fair traders who are committed to the WFTO fair-trade standards. This network may include manufacturers and retailers who are driven by fair-trade values. They signed up to follow a set of compliance criteria

based on ten fair-trade principles that focus on fair prices, good working conditions and minimizing environmental impacts (World Fair Trade Organization, 2014).

One of the key focuses of fair-trade practice is to minimize environmental impact of production. Application of sustainable production methods and reduction of waste generation are among key priorities. Waste is a growing problem associated with environmental and social impacts, which remain unresolved to date (Sinha et al. 2016). Waste can also be an indicator of an inefficient process (Pongrácz, 2009) which ultimately makes monetary lost in two stages: first when raw materials are purchased and then at the time when waste materials are discarded. Moreover, waste, when dumped in open areas, causes several environmental and health issues. It is essential to decouple the waste growth from the economic growth to minimize environmental impact and also to conserve resources. In response to the waste issue, a zero-waste approach has been committed by many industries. This is based on the central notion that prevention of waste is more desirable than treatment of waste (Greyson 2007).

According to Zero Waste International Alliance (2015), zero-waste strategy aims at designing products and processes to avoid waste, i.e. eliminations of all discharges to land, and conservation of resources. Zero-waste system reuses discarded materials to make new products. This process reduces the exploitation of natural resources, avoids pollution, and saves the environment. Textile and apparel industry uses tremendous amount of materials and energy resources and produces a massive quantity of waste, leaving a huge negative environmental impact. Therefore, achieving zero material waste is one of the greatest challenges of the apparel manufacturing industry. Unfortunately, zero waste, potentially a preventive approach, is often misunderstood as unrealistic and impossible target to achieve within the boundary of today's economic conditions (Greyson 2007). However, if zero-waste system is properly implemented, apparel manufacturing industry could possibly convert waste into something useful and economical. Rissanen and McQuillan (2016) highlighted that the concept of zero waste in fashion design addresses the inefficiency in fabric use and provides opportunities to explore new forms of creation.

Handloom industry could be a powerful sector for developing local economy, promoting ethical trade and sustainable communities in Sri Lanka. However, there is a little empirical research done to date regarding the actual benefits, especially when the industry is engaged in an environmentally conscious production and ethical trade. This paper draws a case study from Sri Lankan handloom textile industry to illustrate an environmentally and ethically responsible manufacturing approach.

Methods

A case study approach was employed to investigate the sustainable and ethical manufacturing practices of a handloom textile manufacturing company based in Sri Lanka. Case study is considered as the preferred method when holistic, in-depth investigation is needed, as this method allows the researcher to closely examine the data within a specific content and investigate the real-life phenomenon (Yin, 2003). An in-depth examination of a single case has been used in this research, because the main purpose of this study was to gain a deep understanding of a specific theme of application and share the best practices. Single case allows better explanation of an application of a theory or principle. As Siggelkow (2007) emphasized, single case can be a very powerful example, if it represents a rare phenomenon. Generalization in this case could mean the application of finding to another single case, but not for the whole population (Mariotto et al., 2014). X Ltd has been selected as the case because it is the only fair-trade guaranteed textile handloom company in Sri Lanka, which allows generation of new insights that other textile handloom companies in the country have not yet been able to generate.

For this study, data were collected using semi-structured interviews and field observations. Interviews were conducted with the Factory Manager, Human Resource Manager and the Business Manager of the company. Sustainable manufacturing process and the adherence to fair-trade principles were investigated in detail and verified by using two consecutive field visits.

Results

X Ltd started in 1991 with 15 women employees, gradually developed into a social enterprise that empowers women entrepreneurs, which then led to a buildup of sustainable communities. It is a design-led handloom textile manufacturing company that has gained a solid reputation for supplying 100% cotton, handmade products of superior quality and innovative designs. As one of the dominant suppliers of quality handloom products in Sri Lanka, X Ltd gained a significant market share for a variety of handloom textile-based products such as handloom clothing, hand-crafted soft toys, household linen and also various types of accessories. The company also captures a place in the global market as a supplier of sustainable, handcrafted products. Approximately 85% of the company exports are sent to European countries such as Germany, UK, Netherlands, France and Italy. Further, X Ltd also caters to other export markets such as Australia, USA, Japan, India, Korea, Thailand, Norway, Sweden, China and Maldives. Products are showcased in some of the world renowned trade exhibitions such as the Frankfurt Gift Fair.

X Ltd owns four major production facilities located in the rural areas of the country. Main production facility comprises of a dye house, a weaving centre, a cutting room, an apparel manufacturing section and also toys and accessories manufacturing section. Additionally, there are various decentralized weaving centres or home-based weavers linked to the four major production facilities. Main production facility supports not only decentralized weaving centres but also home-based craftsmanship where discarded handloom textiles are converted into useful by-products. The company also owns retail shops in various cities in Sri Lanka to sell their products locally.

Case study reveals that the manufacturing practice of X Ltd represents some of the key elements of sustainable fashion. Their products are manufactured with an environmental and social responsibility in mind. Significant time is spent to develop unique designs, leaving space for creativity, with premium quality and longevity. Handloom fashion clothing is designed to be trans-seasonal and caters essentially to a high-end, niche market. Unique fashion designs give the consumers a personalized feeling and satisfaction of wearing a quality, hand-crafted product.

X Ltd is committed to fair-trade principles with a special focus on community-centred sustainability through empowering poor, particularly women and differently able people. X Ltd is a member of WFTO since 2012 and committed to follow ten fair-trade principles, as described in the “Fair-trade practice” section. Moreover, manufacturing process has been developed to achieve ‘zero material waste,’ which is further explained in the “Zero-waste manufacturing” section.

Fair-trade practice

X Ltd subscribes and maintains ten fair-trade standards prescribed by WFTO, as follows:

(1) Creating opportunities for economically disadvantaged producers

This principle focuses on poverty alleviation through trade forms by providing opportunities for marginalized small-scale producers. X Ltd assists people who demonstrate weaving and craft skills yet struggle to find initial capital to purchase raw materials or unable to access a suitable market to sell their products at a reasonable price. X Ltd provides those people with various advocacy schemes by;

- (i) Providing raw materials, product designs and any other resources required to run a home-based production.
- (ii) Providing residential training regarding product designs, expected quality levels and required skills

for them to develop independent production facilities.

- (iii) Appreciating and promoting their design ideas.
- (iv) Committing to purchase their products at a fair price.

Moreover, company works with the local communities and encourages them to create working groups. They are provided with adequate resources such as raw materials and credit facilities to purchase machinery to start community-based manufacturing centres (for weaving or creating by-products from material waste). X Ltd is committed to buy their products by paying a fair price, which, in return, helps the community to be employed and raise their living standards.

(2) Transparency and accountability

This principle highlights the requirement to be transparent in managing all aspects of the business. By adhering to this principle, X Ltd keeps records of all of its transactions and maintains evidence whenever possible. For instance, records are maintained for employee training, skill development programmes, welfare facilities and payments to third parties. Employees’ register is regularly updated for both in-house workers and those who work remotely. Company also maintains an event calendar for annual training programmes and welfare activities which are financed by the annual budget. An annual report is prepared including all the necessary information as per WFTO standards and presented in regular audits. In order to ensure the transparency and accountability, X Ltd provides updates to WFTO at regular basis regarding their events and actions.

(3) Fair trading practices

X Ltd works cooperatively with its employees and maintains long-term relationships, especially with the employees who work remotely. Operational relationships are based on mutual trust, respect and effective communication. There is a guaranteed purchase of products manufactured in home-based or community centres. In case of quality issues or any other manufacturing defects, employees are retrained and the confidence is rebuilt, as the whole idea of fair-trade practice is to give these economically disadvantaged people a helping hand to raise their livelihood. This concept of trading goes beyond the commercial aspects of a business as an employer, and workers are continuously committed to develop and maintain fair trading practices. Moreover, if anyone in the surrounding community is interested in joining the business as a sub-contractor or an individual weaver, X Ltd provides necessary resources to start up the business such as initial training, loan facilities, raw materials and machineries. For those who are willing

to be employed in the main production facility, several welfare facilities are provided by the company in order to create better working conditions. For example, bicycles are donated for the people who need to travel a long distance, and child day-care centres are operated within the premises so that parents could keep the children in their vicinity in the day care centre while working in the weaving centre. Women are encouraged to enrol their child to the day care centre, and they are allowed to visit their children during the lunch break, etc.

(4) Payment of a fair price

A fair wage is paid for the employees who work in the production facilities, and the opportunity is given to earn incentives for any extra units produced beyond the target level. For home-based workers or decentralized working groups, raw materials are provided and a guaranteed minimum price is paid for each of the unit produced. X Ltd has an open policy to disclose the cost breakdown of any product manufactured, which facilitates workers to ensure that they are getting a fair price. X Ltd also allocates a percentage of the annual profit for employees' training, development and welfare facilities.

(5) Ensuring no child labour or forced labour

Recruitment of employees and payment structures are based on the national labour law. People below 18 years of age are not recruited, and child labour is strictly prohibited, even in a home-based working environment. Production efficiency target is set for 50%, and the employees are not forced to exceed the target. However, an incentive is paid for the individuals who exceed the daily target with the expected quality. Decentralized or home-based workers experience a very flexible working environment, and their targets are considerably lower than the factory targets, yet it is agreed upon to complete a specified amount of pieces within a given period of time. Individual circumstances are considered, and manageable targets are set for people who have personal commitments, as fair-trade practice always promotes ethical working conditions.

(6) Commitment to non-discrimination, gender equity, women's economic empowerment and freedom of association

X Ltd does not discriminate its employees based on their gender, disability, religion or race. Both male and female workers are employed; however, female employees represent the majority of the workforce (95% are female workers). Nevertheless, the management represents 50% of male and 50% of female workers. There are also differently able employees working in production facilities and in home-based centres. They are given special attention and provided with achievable production targets.

Particularly, women employees are empowered and encouraged to take the leadership of the business. The nature of the business facilitates empowering women as most of weavers or craft workers are women who may ultimately become entrepreneurs or the leaders in weaving or craft centres.

While there are no restrictions to join trade unions, company has developed an internal system to listen and resolve the issues or concerns of the employees. Small groups comprising of few employees and management representatives are formed for the purpose of providing a platform to discuss any concerns or issues of employees. Those discussions usually lead to identify problems and provide appropriate solutions. Management representatives of each group forward the discussion minutes to the 'think tank' team which is comprised of senior managers. They evaluate the issues and forward the recommendations to the board of directors for further action. The company has been able to resolve several employee issues through this initiative, which can be recognized not only as a friendly approach to deal with employees' concerns but also as a platform where several ideas for business improvement would emerge.

(7) Ensuring good working conditions

X Ltd is committed to provide safe and healthy working environment for all of its employees as per the guidelines provided in the national labour law. Employees are educated regarding health and safety requirements through regular awareness programmes organized by the company. Frequent audits are conducted to ensure safety working conditions, both in production facilities and decentralized working centres.

(8) Providing capacity building

X Ltd supports to develop skills and capabilities of the employees, from home-based weaver to the top management. New employees receive 6 months training that focuses on process awareness and skill development. Management staff undergoes an assignment-based training in each section of the company, which in turn would help to improve their knowledge regarding the working process of each of the sections and the skill/knowledge required to fulfil each of the tasks. Moreover, company-sponsored education or training programmes (skill development, quality, leadership, etc.) are provided to the employees, including home-based workers, in order to upgrade their knowledge and skills. Progress of each employee is evaluated through an employee appraisal system, which is held once in every 3 months, and the employees are further developed using follow-up action plan.

(9) Promoting fair trade

X Ltd promotes the concept of fair trade both locally and internationally through awareness programmes, displaying fair-trade logo or a label and taking part in various fair-trade fairs. In several occasions, company management has been invited to give promotional speeches in world fair-trade conferences.

(10) Respect for the environment

While handloom industry is recognized as an environmentally sustainable industry due to its low energy and resources used, X Ltd has taken further sustainable initiatives to improve its environmental performance. Raw cotton is imported from India and dyed in a company-owned dye house by using standard German dyes, which are less toxic. Waste water from the dye house is treated and released to agricultural fields, and the dye sludge is sent to be reused in the cement industry. The production process focuses on achieving zero material waste, as explained in the “Zero-waste manufacturing” section.

Zero-waste manufacturing

X Ltd takes a responsible approach to avoid landfill or incineration of textile waste and to promote reuse of waste 100% to create various by-products. ‘Zero material waste’ is the goal of this approach where waste fabrics from one manufacturing process are used as input materials to create another product. Fabrics are woven entirely by using handloom machines, and the output could be either a handloom saree or a fabric. If the product is a saree, it is woven for the required dimensions without generating any waste material. Other handloom fabrics are mainly used to produce handloom apparel, household linen, accessories and soft toys.

Handloom apparel products are limited in designs and quantities. As the fabrics are colourful and attractive, designs are meant to be simple, yet those garments are suitable for many occasions due to their premium quality and rich appearance. Waste fabrics generated from the apparel manufacturing process are used to create diverse range of by-products, as shown in Fig. 1. These waste fabrics are used very systematically and creatively and selected carefully for each of the by-product based on the size of the waste material. For example, the largest pieces of fabrics are used to create products such as bed runners, pillow cases or tablecloths. Next size set of waste fabrics is used to create products such as table mats, soft toys and laptop covers. Subsequently, remaining sizes are used to manufacture purses, patchwork products (table mats, appliqués for cushion covers, small soft toys, etc.). The smallest set of waste fabrics are used to manufacture accessories such as hair bands, necklaces, key tags and home decorations. X Ltd connects with a number of local craft workers and provides

them with waste materials to manufacture those by-products.

As the company policy is to divert all wastes from landfills, even a small piece of fabric is not wasted, rather reused to make something useful and marketable. Tiny pieces of fabric off-cuts are utilized to produce thin layers of sheets as shown in Fig. 2. The production process of creating such sheets includes grinding small fabric pieces and mixing them with glue, squeezing using rollers and pasting back into fabric to make colourful, thin layers of sheets. Those sheets are exported to Sweden to be used for packaging purposes or craft work at nursery schools.

Not only waste fabrics but also waste threads are reused to make very creative lamp shades in various shapes and attractive colours, as shown in Fig. 3. Premium quality is integrated into all products that target high-end consumer markets, both locally and internationally.

Discussion

Environmental and social challenges faced by the global textile and fashion industry should be dealt with the development of a range of solutions. As consumers increasingly respect the environment and ethical practices, sustainable and fair trade certified fashion products are in demand. Fair trade is a recognized strategy for rural development in the Global South. While traditional welfare approaches have failed to address the labour issues associated with the international trade, fair-trade movement has remarkably bridged the Northern consumers’ interest on ethical purchasing with the Southern producers’ efforts of gaining fair returns. This type of a concept is extremely important for uplifting living standards of the rural communities and the fashion consumers who are longing for ethical and green products.

This case study provides a good example of the application of fair-trade principles in the textile handloom industry. Here, it is evident that there is a definite potential of this practice to establish a new direction in environmentally and socially responsible textile and fashion products. Fair-trade principle is a globally recognized approach for fair terms of trade. Community benefits from the fair trade are easily identified through the study. The key benefits would be the increase of employment opportunities for the people who require paid work, empowering individuals, capacity building, improving the quality of life and strengthening the social cohesion within a community.

It is well understood that the 30 years of civil war in Sri Lanka destroyed the infrastructure, injured the country’s productive forces, weakened the moderate influential people and resulted in identity withdrawal. Furthermore, during these extended periods of war, local women often suffered directly or indirectly as their husbands and adult children took up arms. Textile handloom manufacturers



Fig. 1 Product range: achieving product diversity through zero material waste approach

in North and North East regions were heavily affected by this situation, and thus, the industry experienced a decline. In attempting to redevelop these communities in the post-war era, bringing together populations and the use of stabilizing projects cannot be fully achieved using the traditional economic models which are merely driven by profits. Alternatively, fair and sustainable trade could provide a valid and beneficial approach in rebuilding communities. Fair-trade approach could open up opportunities

for local producers in the war-affected areas to earn sustainable income and improve future prospects for their communities. Therefore, it is vital to invest on restoring this industry in war-affected regions and assist them to align the business with fair-trade principles. This type of an initiative would help to achieve a rapid improvement on the well-being of the local populations and enhance the pacification of relationship with former rivals. In this regard, this case study provides a feasible trading approach



Fig. 2 Craft sheets created from waste fabrics



Fig. 3 Lamp shades created from waste threads

that could be adopted to rebuild the textile handloom industry in the war-affected regions of Sri Lanka.

Home-based or community-centred working models evident through this study provide a viable employment option for rural women who want to contribute to family earnings but unable to travel long distances due to family commitments. Nevertheless, many rural women in Sri Lanka tend to go abroad as domestic workers to raise their living standard, which leads to several social issues including the safety and protection of the children and the unrest among family members. A home-based or a village-based employment opportunity could resolve many of those issues and would provide a flexible working environment for women to balance their work life and family life. It is therefore evident that the fair-trade approach could become a potential solution for the issues of poverty and well-being of the rural community of Sri Lanka.

Successful application of the concept of 'zero material waste' in X Ltd boldly confronts the common understanding of 'achieving a waste free manufacturing environment is unrealistic'. Moreover, this study proves that zero-waste approach carries obvious potential for positive economic growth. Indeed, product diversification of X Ltd is achieved through the zero material waste approach, in which waste materials are used as resources to design various by-products that cater to different market segments. For instance, soft toys, fashion accessories and patchwork products are designed using waste materials, and they can be introduced to a different market to that of their core

products. While most of those products have already gained access in the global market, rapid increase in the global demand for sustainable and fair-trade products would open up new trade avenues.

Achieving business success whilst respecting the three pillars of sustainability (economic, social and environmental) is still a struggle to many businesses. In this context, this study demonstrates a potentially viable business model that interlinks the environment, human well-being and economic benefits for the success of a business. Key features of this model could be highlighted as community-centred production, guaranteed minimum price leading to a stable income for workers, more accessibility to export markets through fair-trade labelling, enhancement of producer self-confidence, reduction of disputes, resistance to conflicts and respect for the environment.

Recommendation for future research

Sri Lankan craft sector is still under explored to understand its potential to reap economic benefits. Furthermore, conventional economic data always underestimates the capacity of this sector and its potential for the development of microeconomies. Many small-scale producers seem to be often ignored, and therefore, an accurate representation of the economic, social and cultural impact of this industry is lacking. Hence, it is recommended to conduct a detail study of the handloom sector to discover the current status and also to update statistical data of the sector that would support further research and analysis.

This case study demonstrated the application of fair-trade principles using a single case. It is recommended to conduct similar type of studies with other handloom manufacturing organizations in Sri Lanka to enable comparative analysis and verification of the impacts of fair trading. It is also worthwhile to investigate the possibility of applying fair-trade principles to other community-based craft industries in Sri Lanka, in order to make those industries economically, socially and environmentally sustainable in the long run. Moreover, fair-trade impact assessment on craftsmen in enhancing capacities and improving their quality of life needs to be explored through direct dialogues with them.

Conclusions

The study attempts to explore the possible connection between craft practice and sustainable development. This research demonstrates the successful application of fair-trade principles in developing sustainable trades and communities. It also suggest a sustainable business approach that could possibly be adopted by other textile handloom manufacturers and craft businesses. If this model was to be expanded significantly with the inclusion of communities affected by war, it would positively influence local economy and also the society by alleviating poverty, rebuilding collaborative relationships among different ethnic groups and safeguarding the cultural identity of Sri Lanka.

Sustainability is soon changing from an option to a necessity. As the global demand for sustainable and ethical products surge, application of sustainable and ethical aspects in developing textile handloom products would help to improve the recognition and also the market share in the local and global markets. It is therefore recommended to explore other community-based craft practices in Sri Lanka and investigate the possibility of turning those to profitable businesses by aligning them with sustainable development and fair-trade principles.

This research is limited to a single case study and cannot be generalized to a wider population. However, this study invites other craft practitioners to revisit their manufacturing processes and investigate the possible application of sustainable and fair-trade principles into their businesses to harness the social and economic development.

Authors' contributions

DGK designed the research and methods. DGK, SP and TW conducted the field visits and collected the data. DGK and SP drafted the manuscript. TW provided the technical help. All authors read and approved the final manuscript submission.

Competing interests

The authors declare that they have no competing interests.

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